

KING COUNTY IT BUDGET ADVISORY FOR 2010 BUDGET YEAR

APRIL 2009



King County

**OFFICE OF
INFORMATION
RESOURCE
MANAGEMENT**

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Preface

April 3, 2009

King County faces a serious General Fund budget deficit in 2010. Last year, the IT Budget Advisory Report provided advice to all county agencies with potential savings opportunities for reducing the 2009 General Fund budget deficit. This year's IT Budget Advisory Report identifies an expanded list of additional savings opportunities that can be achieved to reduce the 2010 General Fund budget deficit forecasted by the Office of Management and Budget. In addition, a section is included in the report for Executive branch agencies that directs Executive branch agencies to make specific cost reductions for 2010.

The IT Budget Advisory identifies fourteen areas of mandatory cost reductions I am directing Executive branch agencies to make, including:

- Desktop computing – (desktop hardware and software)
- Computing infrastructure – (hardware, software, printers, and data center)
- IT contracts - (contracts for hardware, software, maintenance, and wireless)
- Efficiency savings – (help desk, remote access, and conferencing technology)
- Risk mitigation – (new County data center, and mandatory and essential projects)

The discussion of each topic includes options for your consideration to meeting each. Agency actions for meeting these directions will be submitted to OIRM for review to ensure there are no negative impacts on other agencies resulting from cost reductions being proposed. OIRM will be working closely with OMB to insure that reductions related to IT Reorganization are clearly identified. Any references in this advisory to IT Reorganization apply only to the Executive Branch.

In addition to the fourteen budget direction topics there is advice on an additional eight topics where there are potential cost reductions or efficiency gains. A discussion of operational efficiencies is included in Section 3 followed by a summary table in Section 4 that highlights cost reductions and estimated savings that are discussed in the individual topic sections.

I want to support you as you validate the direction and advice provided in this year's IT Budget Advisory, and I look forward to working together as we find creative ways to reduce the budget deficit. Please let me know how I can be of further assistance to you. For questions concerning this advisory report, please call my office at 263-8005 and we will respond to you quickly.

David Martinez
County Chief Information Officer

Section 1: CIO Direction on Cost Reductions

A. Desktop Computers

1. Avoid Purchasing New Desktops Computers

DIRECTION

Avoid buying new desktop computers in 2010. When the purchase of a desktop computer is needed, approval for an exception would be made by the CIO. The expectation is that if the desktop computer is not broken, do not replace it. The age of the computer is not sufficient rationale for replacement.

The following are alternatives for meeting this direction:

- Defer replacing desktop computers and funding equipment replacement until 2011.
- Locate surplus desktop computers from other agencies using the IT asset management system.
- Purchase alternate workstations to replace desktop computers at end of life and when additional desktop computers are required.

Current equipment replacement plans for all County agencies have identified approximately 2,192 desktop computers to be replaced in 2010 and another 2,114 to be replaced in 2011. By carefully scrutinizing what needs replacement in 2010 and 2011 agencies can avoid or defer these replacements to make available these funds for essential business operations in 2010 and 2011.

There will be two exceptions: First, when a desktop computer fails two or more times in a week and impairs productivity and business operations, the desktop computer should be replaced; second, when a desktop computer will be used to meet ABT requirements and it does not have the capacity or ability to do this, the desktop computer would be a candidate for replacement in 2010 or 2011. Contact the ABT program office to get information on the required desktop computer specifications.

2009 Action

In 2009 develop a plan to manage the department's desktop computer inventory using these alternatives and Executive branch agencies should provide your plan to Sharon Glein to coordinate with the IT Reorganization program. Contact Bob Neddo at 263-7951 to obtain information on the centralized hosting service for desktop applications.

OPPORTUNITY

Defer replacing desktop computers:

Replacement costs for desktop computers range from \$800 – \$1,500 and can be avoided by not purchasing new desktop computer and not funding equipment replacement for desktop computers. If 50% of the 2,192 desktop computers identified in the replacement plans could be

delayed beyond 2010 over \$1.1 million in cash would be available for other critical County operational needs.

- The majority of agencies annually fund replacement purchases only for equipment at the end of its replacement cycle. Savings would be the cost of a new desktop computer multiplied by the number of desktop computers projected to be at the end of their life in 2010.
- For agencies which annually fund equipment replacement as a percentage of the equipment replacement cycle (for example, 20% annually for a 5 year cycle), savings would be the amount historically planned to fund equipment replacement in 2010.

Locate surplus desktop computers:

The use of surplus equipment will avoid the 2010 cash outlay for new equipment in the event that another desktop computer is required.

Purchase alternate workstations:

Alternate workstation per device costs are \$679 in the 1st year; and annually thereafter it is \$78 for service and \$53 for funding equipment replacement. Projected savings are \$365 per device in the 1st year and a favorable total cost of ownership 30% less over two life-cycle comparison to desktop computers. If 30% of the desktops scheduled for replacement in 2010 use alternate workstations, savings will be \$240,000.

**BUSINESS OBJECTIVE
& RATIONALE**

It is the overall goal of King County to provide desktop computing to its employees in the most cost effect and efficient manner possible utilizing public funds. By spending less on desktop computers and preserving the current level of desktop functionality, costs are reduced. Changing the standard practice of replacing equipment based on a pre-determined cycle when desktop computers are adequately functioning, will also reduce costs.

King County has over 10,000 desktop computers spread through the organization. The estimated equipment replacement cost for 2010 and 2011 based on historical practices would exceed \$2 million each year. In the April 2008 IT Budget Advisory, the CIO advised agencies to extend equipment replacement cycles to five years from the historical practice of three or four years. Desktops not meeting the five year cycle were to be replaced only when they fail or could not run current business applications.

When a desktop computer must be replaced, alternate workstation technology using a centralized hosting service for desktop applications is the preferred approach, because the devices and support are significantly less expensive than a desktop computer. Since the capabilities of these computers is limited to only essential applications, in general they are not as vulnerable to malware attacks, have a longer life cycle, use less power, and are less expensive to purchase.

WORK FORCE

Less time would be needed by support staff to support alternate

AFFECT workstation, but this could be off-set if aging desktop computers require additional support. Labor efficiency gains will be repurposed to other critical IT needs when appropriate.

2. Enforce Power Management on Desktop Computers

DIRECTION Complete installation and use power management software on all desktop computers by the end of 2009 and achieve the County goal of 39.6%. King County in 2009 is actually achieving a reduction of 25.7% using this software.

The current policy established in 2008 is set to achieve a 39.6% reduction. Some agencies have established a stricter policy and exceed a 50% reduction by shutting down power at 6:00 p.m. and restarting power at 7:00 a.m. weekdays to match their business operations. Stronger policies should be considered to increase savings and further reduce greenhouse gases.

All Executive Branch computers currently have Verdiem installed and additional licenses were distributed to non-executive branch agencies in 2007. All agencies are highly encouraged to utilize these licenses so the County can meet its goal of realizing power savings and reducing greenhouse gases further in 2010.

2009 Action

In 2009 plan what needs to be done to meet or exceed the target energy reduction for 2010.

OPPORTUNITY The County is expected to save \$127,000 (2008 actual \$97,000) in energy cost and reduce greenhouse gas by 2.7 million pounds in 2009. This will be done by achieving a 25.7% reduction in power usage. This success does not come close to meeting the County goal of 39.6%. Results by many agencies show that this goal and even a higher result are clearly obtainable. Just meeting the established goal will increase savings to \$168,000. Increasing our goal a modest 5% to 45% would increase the savings to \$191,000 and reduce greenhouse gas 4.7 million pounds in 2010.

Agencies can compute energy savings rate by multiply \$17.00 times each desktop computer.

BUSINESS OBJECTIVE & RATIONALE The goal of this direction is to lower electricity costs by reducing power consumed by desktop computers and also create a side benefit of lowering green house gas production.

While most desktop computers have energy-saving settings such as standby hibernate and shutdown, over 80% of desktop computer users inappropriately disable low-power settings. Previously, industry best practice advised that desktop computers be left turned on all the time because powering up and down was hard on component parts. With

advances in technology, increases in the cost of power and environmental concerns about power generation, the best practice now is to power off computers when they are not needed for a period of time.

**WORK FORCE
AFFECT**

Time would be needed by support staff to configure, deploy, and support energy saving policy.

Software and tools are available to facilitate and ease the implementation of power management and reduce the work effort impact on support staff. For assistance, contact Bob Neddo at 263-7951.

B. Computing Infrastructure

3. Reduce Overall Technology Costs

DIRECTION

Reduce the overall technology cost by minimizing the number of servers and the on-going costs for servers in 2010. Avoid purchasing new servers in 2010. When the purchase of an unplanned server is needed, approval for an exception would be made by the CIO. The following are alternatives for meeting this direction:

- Migrate stand-alone servers to virtual servers and decommission existing servers.
- Defer replacing servers and equipment replacement funding until 2011.
- Use the Enterprise SharePoint Service for file services and decommission existing file servers.
- Consolidate like servers together when possible.
- Repurpose old servers rather than surplus.
- Locate surplus servers from other agencies using the IT asset management system.

Equipment replacement plans for the Executive Branch agencies have identified approximately 119 servers be replaced in 2010 and another 75 to be replaced in 2011. By carefully scrutinizing what needs replacement in 2010 and 2011 agencies can avoid or defer these replacements to make available these funds for essential business operations in 2010 and 2011.

2009 Action

In 2009 develop a plan to reduce the number of servers in 2010 and migrate to SharePoint Services, and provide to Sharon Glein to coordinate with the IT Reorganization program.

OPPORTUNITY

Defer replacing existing servers:

Replacement costs for servers range from \$3,500 – \$20,000 and can be avoided by not purchasing servers and not funding equipment

replacement. If 15% of the 119 servers identified in the replacement plans could be delayed beyond 2010 over \$180,000 in cash would be available for other critical County operational needs.

- If the agency annually funds equipment replacement as a percentage of the equipment replacement cycle (for example, 20% annually for a 5 year cycle), savings would be the amount historically planned to fund server replacement in 2010.
- If the agency annually funds replacement purchases only for equipment at end of its life, savings would be the cost of a new server multiplied by the number of servers projected to be at the end of their life in 2010.

Use SharePoint services:

Savings can be achieved by moving to SharePoint Services for file services when a file server needs to be replaced and the file server replacement and maintenance costs exceed the SharePoint service cost for all users on that file server. The 2010 monthly fee for each user of SharePoint services is estimated to be \$7.22. Financial models developed by Alinean (a provider of tools to cost justify IT and business services solutions) using data specific to King County indicate a net present value saving of \$1 million could be achieved in five years based on direct saving if SharePoint is implemented countywide. Some of these direct savings include IT cost reductions in labor and file servers, and reduce business unit labor costs for collaboration sites. In addition to the direct savings there would be significant indirect savings in meeting productivity, collaboration productivity, document management, and reports management.

Migrate to virtual servers and consolidate servers:

Reducing the number of servers provides the following savings:

- Decrease in data center service cost (floor space, power, cooling).
- Decrease in power cost for servers not currently in data center space.
- Decrease in hardware maintenance cost for servers out of warranty.

Consultant studies have shown that virtualizing a minimum of 83 servers in 2010 and 2011 can produce positive cash flows of \$111,137 and \$371,752 respectively or an average per server of \$1,339 and \$2,239. Virtualizing 417 servers over the next 5 five years would produce a net present value of \$1.3 million.

Locate surplus desktop computers or repurpose existing ones:

The use of surplus and repurposed equipment will avoid the 2010 cash outlay for new equipment in the event that another server is required.

**BUSINESS OBJECTIVE
& RATIONALE**

IT Reorganization is focused on reducing the number of servers that the County owns and manages. To do this, new and replacement servers should only be purchased when absolutely necessary and the

life of existing servers should be extended.

In the past, servers were typically replaced on a four year replacement cycle. In the April 2008 IT Budget Advisory, agencies were advised to extend the replacement cycle to at least five years. The direction now is to defer all replacements until 2011 and to consolidate servers through virtualization. Candidates for virtualization were identified in a study late in 2008 that indicated 417 of the existing 635 Executive branch servers, or 67% of these servers could be virtualized. When servers are virtualized on new hardware in 2010, existing server assets should be repurposed.

While non-executive branch servers were not part of the consultant's study, similar savings could be expected for these servers. It is estimated that there are 350 servers in the non-executive branches.

Enterprise SharePoint Service is being made available Countywide in the second quarter 2009. This service will facilitate collaboration and provide a platform that can be leveraged to replace file servers.

**WORK FORCE
AFFECT**

There are several affects to work force when servers are reduced:

- Fewer servers mean less time that support staff would need to devote to server management.
- Using virtualization technology requires additional training for server administrators.
- Implementing virtualization and consolidation would require additional staff effort to migrate from the current stand-alone server environment.

Labor efficiency gains will be repurposed to other critical IT needs when appropriate.

4. Enforce Use of Printers That Can Be Shared In Workgroups

DIRECTION

Print only to shared printers. When the purchase of an unplanned printer is needed, approval for the exception would be made by the CIO. The following are options for meeting this direction:

- Replace existing printers with the standard model printers available on the County's master contract for IKON printers.
 - Make printers available on the network to workgroups, sections, divisions, and agencies.
 - Use the mailbox and password feature on the IKON printer to securely print documents containing confidential or private information.
- Eliminate purchases for personal printers and do not set aside funds for personal printer supplies.

OPPORTUNITY

Existing supplies, maintenance, and support costs for printers, copiers

and faxes can be reduced by leasing IKON printers available through the master contract. Typical rates are less than \$.008 per page for black and white (after the first 15,000 copies) and \$.04 per page for color printing plus a monthly fee of \$330/month for black and white and \$425/month for color. These rates include equipment lease, toner, maintenance and repair costs. (The monthly lease rate can be adjusted depending upon the desired monthly page allowance.) The replacement cost for the most commonly used personal printer model in the County is \$699 and its toner costs are \$127 per cartridge for about 2,000 pages.

BUSINESS OBJECTIVE & RATIONALE Reduce the cost of supplies, maintenance, and power consumption for copying, printing, faxing and scanning through use of multifunction printers that can be shared by workgroups, sections, divisions, and agencies.

Personal printers are scattered throughout the King County. Although toner and ink cartridges for these printers may be small expenditures on an individual basis, these small costs add up for the aggregate; there are cost savings when shared network printers are used instead. Network printers are an area of opportunity for volume discounts and become most beneficial when the County operates as an entity rather than on an agency basis.

WORK FORCE AFFECT Fewer printers mean less time that support staff would need to devote to printer management. Labor efficiency gains will be repurposed to other critical IT needs when appropriate.

C. IT Contracts

5. Reduce Cost of IT Purchases

DIRECTION Reduce the cost of IT purchases for hardware, software, licensing, maintenance, training, consulting and professional services. Options include:

- Renegotiate annually renewable contracts to a multi-year term where legally allowed.
- Establish new contracts as multi-year with multi-year pricing discounts through the RFP/ITB process.
- Use existing universal (master) contracts for IT purchases.
- Advertise and establish new countywide universal (master) contracts to acquire IT products and services.
- Consolidate existing IT contracts to obtain volume discounts from vendors.

OPPORTUNITY In 2007 and 2008 the Executive Branch spent in excess of \$15.5 million and \$14.7 million respectively on computer hardware, software, supplies, and maintenance agreements. Costs can typically be

reduced by 5% - 10% when contracting for a five year term instead of a one year term. Universal (master) contracts cost can typically be reduced by 5% - 10% or more when competitively advertised. While not all the cost in 2007 and 2008 would necessarily fall into these two contracting areas assuming a modest 25% for each would reduce IT costs between \$368,000 and \$736,000.

2009 Action

OIRM complete review of all IT contacts. Determine contracts that can be master contracts and/or be extended to five year contracts.

**BUSINESS OBJECTIVE
& RATIONALE**

Provide cost savings for the County by negotiating and managing IT master contracts centrally that includes volume discounting and multi-year contracts.

An opportunity exists to achieve cost savings through volume discounts and multi-year contract terms when the County contracts as a single entity for IT goods and services. Individual contracts for IT support, maintenance, purchase, and other items have reduced the County's opportunity to obtain volume discounts, simplify IT procurement, and standardize IT products and services. Annually renewable contracts have also increased contract administration by requiring a contract amendment to extend contract terms for another year.

**WORK FORCE
AFFECT**

The OIRM contract section is working toward the goal to make the IT master contract available as much as possible depending on the staff resources.

6. Reduce Cell Phone and Wireless Device Costs

DIRECTION

Reduce the cost of cell phones devices and cell phone usage by:

- Using only master contact cell phone plans.
- Disconnecting cell phones, Blackberries and wireless air cards with no usage during the past 12 months.
- Removing features from the cell phone number (such as text messaging) that have not been used in the past 12 months or that are deemed unnecessary.

Include in agency budget requests for 2010 the savings from consolidating cell phone plans achieved at the end of 2008. See Appendix A for a break down by agency of the \$344,995.92 savings.

For assistance, contact Barbara Ivery, Telecommunications Supervisor at 263-7885.

OPPORTUNITY

For 2009, \$344,995.92 in savings has been identified for cell phone plans. The telecommunications group has identified two additional areas of savings. In January 2009, 398 wireless devices (air cards, Blackberries and cell phones) were disconnected rendering an annual

additional savings of \$7,271. By continuing this disconnection process monthly, there is opportunity for additional savings of at least \$6,000 annually. Using Google 411 service of Qwest service would save an additional \$6,000.

BUSINESS OBJECTIVE & RATIONALE Reduce overall costs for cell phones, Blackberry devices and wireless air cards.

Telecommunications staff developed recommended changes to wireless device plans in late 2008. In November 2008 all users were moved to County-wide pooled minute plans. There are now two plans for each of the three vendors the County currently uses; one for high volume users and another for low volume users. This action is estimated to save the County \$344,995.92 annually.

Telecommunication continues to work to create more stringent criteria for getting a cell phone / PDA, leveraging employees' personal devices, acceptable use, the review of telephony policies/standards for issuance of cell phone, improve record keeping, and administration.

WORK FORCE AFFECT Agencies will be required to maintain updated wireless inventories and review services scheduled to be disconnected monthly.

D. Efficiency Savings

7. Establish Equipment Inventory for Excess Equipment

DIRECTION In 2009 a new IT asset management system managed by OIRM will become operational. As part of this system, agencies can establish an inventory of potential surplus equipment and identify that it is available for other agencies.

- Do not send this equipment to King County Surplus (DOT Fleet property).
- Agencies should search the IT asset management system before the purchase of new equipment to see if excess equipment might address their business needs.

OPPORTUNITY See **Avoid Purchasing New Desktop Computers** and **Reduce Overall Technology Costs**.

BUSINESS OBJECTIVE & RATIONALE By repurposing computers, these devices could be very useful to other agencies allowing them to realize expense savings.

The new IT asset management system will be fully operational in the third quarter of 2009. All executive agencies will utilize this new system to maintain and monitor their computer hardware inventory. Historically agencies find themselves with extra or surplus computer hardware (PCs, laptops, printers, etc.). This system will become a useful

repository to identify available hardware.

**WORK FORCE
AFFECT**

IT asset management system support staff in the agencies would be responsible for identifying surplus equipment in the system.

8. Standardize On IT Tools for Efficiency

DIRECTION

There are currently several different tools being utilized to monitor network performance through-out the agencies of the Executive Branch. This decreases buying power, increase training needs, and makes coordination of efforts less efficient. In 2010 the Executive will standardize the tool being utilized. Do not purchase or fund support for additional agency network monitoring tools in 2009.

In 2009 develop a plan for migrating from existing agency network monitoring tools and work with OIRM to establish the standard tool.

OPPORTUNITY

Savings would come from:

- Centralized purchasing and training on a single tool.
- Eliminating the vendor maintenance cost for network tools currently used by the department.

Refer to the August 2008 Updated Benefits Realization Plan for IT Reorganization for the Executive Branch, Appendix D, for potential opportunities for savings using standardize tools.

**BUSINESS OBJECTIVE
& RATIONALE**

The active use of a monitoring/alerting/event management system reduces cost and increase staff productivity. As a shared, integrated toolset, individual agencies or agencies do not need to acquire their own tools to achieve the same capability. The Network Operating Center can provide this service and functionality to the agencies.

Properly monitoring networks increase overall system performance and the productivity of staff Alerts to problems or pending problems, allowing them to be fixed before they impact productivity. Traffic analysis identifies bottlenecks, potential bottlenecks, and inappropriate use. Networks can be adjusted rather than incurring the additional expense for expanding network connections. This allows system administrators and LAN administrators throughout the County to view activity, spot problems, and take corrective action prior to problems occurring.

**WORK FORCE
AFFECT**

None.

9. Standardize on One Countywide Help Desk

DIRECTION

Do not fund purchases for new or upgraded help desk software

(including separate knowledge base and FAQ software), new or upgraded hardware, software licenses and support, and hardware maintenance for agency level help desks.

OPPORTUNITY

Currently there are many help desks spread through-out King County with differing staffing levels and functions. This has lead to a very fragmented approach to help desk service which is both costly and inefficient. Centralizing will remove the inefficiency and lower the overall cost to King County. For agencies that have help desk functions that includes hardware, software, and applications, costs will be reduced by standardizing on a single help desk system and function.

Software savings include

Initial purchase: \$1,500 - \$10,000 depending on the product.

Maintenance: 18% of initial cost annually, \$270 - \$1,800. If maintenance is not purchased, the agency must account for repurchase of the software to upgrade to latest version.

Hardware savings include

Initial purchase: \$8,000 if dedicated server is needed.

Maintenance: roughly 20% - 30% of the purchase price when extended warranty expires.

Replacement: 20% of initial cost annually, \$1,600.

**BUSINESS OBJECTIVE
& RATIONALE**

The Executive branch will standardize on one help desk system with a user self help functions and existing agency help desk systems will not be needed in 2010.

A standard set of processes and procedures for the one help desk will be established in 2009. Existing agency level help desk hardware and software will be decommissioned at that time.

**WORK FORCE
AFFECT**

Support staff work load could increase during transition from agency specific systems to a consolidated system. Labor efficiency gains will be repurposed to other critical IT needs when appropriate.

10. Use Remote Management Tools to Increase Efficiency of Desktop Support

DIRECTION

Implement tools and processes for use by IT desktop support and help desk staff to resolve desktop computer problems from the network rather than needing to be physically present at the desktop.

In 2009 plan for the changes required for this implementation.

OPPORTUNITY

Management of software patches, upgrades, and troubleshooting computer problems can all be done more efficiently and timely with remote management software. On average, use of remote management software decreases resolution time by 50% to 75%. The

average cost per call can be reduced from \$25 to \$6.25 - \$12.50 creating labor efficiency savings.

In 2008, desktop support Central IT were assigned 5,600 tickets (approx 40% of all tickets). If each of these tickets required a visit to the user's desk, the overall support cost would have been \$140,000. In theory, this support cost could reduce to \$35,000 - \$70,000 if all tickets could be resolved using remote assistance.

**BUSINESS OBJECTIVE
& RATIONALE**

Enable remote management tools for support staff to monitor and fix computer issues quickly.

Numerous software products exist today that allow support staff to access and fix end user computers via the network rather than traveling to where the computer is located. This approach enables problems to be resolved faster and increases productivity. One of the tools currently available within the County is Microsoft Window's Remote Assistant.

Using remote access tools to patch and upgrade software decreases the support effort. Implementing standard processes, such as remote management software, means that work does not need to be done at the desktop and through automation it could be done after business hour.

**WORK FORCE
AFFECT**

Desktop support and help desk staff would need training to effectively use a tool like Remote Assistant. Allowing remote access will be a more effective use of IT support staff. Labor efficiency gains will be repurposed to other critical IT needs when appropriate.

11. Use Technology as Alternative to Travel

DIRECTION

Use voice-video conferencing technology to reduce travel costs and achieve labor productivity. Use teleconferences, webcasting, and ViPr, for virtual meetings. For agencies without access to a ViPr system, a portable unit is available through FMD which can be used in certain conference rooms of the Chinook Building.

OPPORTUNITY

Teleconferencing and webcasting can often be used at no or minimal costs. In considering use of the ViPr, savings would be a function of the number of people attending, travel time and distance, and length of meeting. The FMD charge for 1st floor Chinook room ViPr is \$32 setup and \$10/hour.

Costs associated with local or out of area travel are avoided through the use of these technologies. In addition there are productivity gains by doing away with non-productive travel time.

**BUSINESS OBJECTIVE
& RATIONALE**

Reduce the need to travel through use of technology alternatives that allow a "face-to-face" experience using the County's network.

Technology tools are available that simulate the in-person experience by integrating audio, video and interactive elements delivered over the network. Examples of these include Ericsson ViPr video conferencing, Cisco TelePresence, Skype, Microsoft Net Meeting, Citrix Go To Meeting, and Cisco Webex. These tools provide a variety of opportunities and ways to participate in meetings that in the past required travel.

**WORK FORCE
AFFECT**

Some assistance from County technology staff may be needed to setup these technologies.

E. Risk Mitigation

12. Move IT Equipment to New County Data Center

DIRECTION

In 2010 move all IT equipment remaining in County data closets, server rooms, and data centers to the new County primary data center which is scheduled to open in 2009. Include in the department's 2010 budget request the data center cost for equipment that will be moved to the new data center in 2010.

2009 Action

In 2009, develop a plan for which servers will move, when the move will occur, and the cost of this move, including overtime for staff and any hardware vendor fees to support the move. Identify budget savings that will cover move costs. Identify equipment that would be an exception to this move because it must be "local" in order to function properly. Contact Gary Lemenager at 263-7889 to discuss plans for moving to the new data center.

OPPORTUNITY

Potential loss of servers and business interruption are avoided by IT equipment residing in the central data center. Plan for data center fees which will be determined during the 2010 budget process.

**BUSINESS OBJECTIVE
& RATIONALE**

Fully utilize the County's new, state-of-the-art data center and mitigate the risk of systems failures resulting from the use of multiple facilities to house IT equipment.

Servers are spread throughout King County in a variety of locations with no set standards to safeguard these assets. Servers are at risk of potential power outages, earthquakes, and theft. In September of this year the move of the new data center will be complete. The facility has been sized to accommodate future growth in the County's computing needs. This data center is designed to meet current security standards, have redundant power supplies, provide ample network connectivity, and meet building earthquake standards.

Centralizing computing services into a single data center allows more

efficient use of staff resources by increasing the number and complexity of systems supported in the facility without increasing staff. Having computing services in a single data center enables automation of processes and functions currently being done “by hand” by staff in many different locations.

**WORK FORCE
AFFECT**

Support staff could be affected in a number of ways:

- Time would need to be devoted to preparing for and supporting the move. This could involve overtime if the move is done after-hours.
- The new County data center will be operated remotely, so support staff would need training in new operational procedures.

Labor efficiency gains will be repurposed to other critical IT needs when appropriate.

13. Focus on Mandatory and Essential IT Projects

DIRECTION

Only move forward requests for technology projects in the 2010 budget process that are mandatory, regulatory requirements, or essential to the success of critical business functions in the agency or the County. Projects need to support King County’s strategic or operational master plan, have a compelling IT business case, and have specific identified benefit when submitted to OMB in the 2010 Budget.

Return IT project funds to the funding source or receive PRB approval to re-program funds for existing capital funded projects that are no longer high priority.

OPPORTUNITY

No funds will be spent on low priority projects in 2010. Savings will be determined based on the number of low priority projects which were planned for 2010 and not done.

**BUSINESS OBJECTIVE
& RATIONALE**

Focus resources in 2010 on only high priority, high business value technology projects.

Technology projects that at one time appeared to have high business value may not still retain that same value today. Staff, fund and manage technology projects that bring the highest value to the business and are the highest priority for completion. Ensure successful completion of these projects within scope, schedule and budget.

**WORK FORCE
AFFECT**

None.

14. Update Critical Applications for Disaster and Emergency

DIRECTION

Validate that each business application identified as critical for the agency to support its responsibilities in the County Emergency

Management Plan at the time of a disaster is required. If an application is no longer required, contact Mark Van Horn at 263-8058 to remove equipment from the alternate data center and/or disaster contracts, as appropriate.

OPPORTUNITY

Depending upon how the critical application has been mitigated, the following are potential savings. Applications mitigated by the quick-ship disaster service would have cost savings that directly align with the number of servers removed from this service. For equipment removed from the alternate datacenter and decommissioned, hardware maintenance on this equipment may be a potential cost savings. Please contact Mark Van Horn to identify which savings apply to applications no longer deemed critical.

**BUSINESS OBJECTIVE
& RATIONALE**

Align critical County systems with agency emergency plans for continuing government operations and the County Emergency Management Plan.

Recovery of critical applications needed to support the County Emergency Management Plan (CEMP) is like an insurance policy. County agencies need to evaluate and validate that they still need this level of “insurance” to enable fulfillment of agency responsibilities in the CEMP. Investment in recovery strategies needs align with business needs and the level of risk the agency is willing to accept.

**WORK FORCE
AFFECT**

Staff who support applications deemed no longer critical or the infrastructure specific to these applications would not need to participate in annual disaster recovery planning and exercises, or support equipment currently housed at the alternate datacenter.

Section 2: CIO Advice to All County-Wide Agencies

A. Desktop Computing

1. Reduce the Number of Laptops

ADVICE	<p>Reduce the number of laptops used by employees who have remote computing needs and look at other available hardware options. Consider the following alternatives when laptops come up for replacement for users who use a laptop outside the office for:</p> <ul style="list-style-type: none">• Access to files stored on file servers: purchase lower cost NetBooks instead of full-featured laptops.• Email - replace the laptop with an email option, such as an existing Blackberry, and provide a desktop computer or alternate workstation at the office.
OPPORTUNITY	<p>Replacement costs for laptops are approximately \$1,500 and NetBooks range from \$350 - \$450. Projected savings by using NetBooks instead of laptops is the number of laptops that would otherwise be purchased multiplied by the difference in cost ranging from \$1,050 - \$1,150.</p>
BUSINESS OBJECTIVE & RATIONALE	<p>By setting more stringent criteria for who requires a fully loaded laptop and using less expensive alternatives for others, costs can be reduced.</p> <p>Some form of portable PCs are a necessity for employees who spend a significant amount of the time in the field or otherwise away from the office and need remote access to systems. Not everyone requires an expensive, full-featured laptop unit to meet those remote computing needs. People who primarily use email and the standard Microsoft Office applications can be switched to a NetBook option at a significantly lower cost. Employees whose only remote computing needs are email, a Blackberry rather than a laptop should be considered as an option for only remote email access.</p>
WORK FORCE AFFECT	<p>Support staff would spend less time supporting laptops for remote workers. Labor efficiency gains will be repurposed to other critical IT needs when appropriate.</p>

B. Software and Licensing

2. Consider Open Source Software and Generic Licensing

ADVICE	<p>Weigh the merits and benefits of using open source software and/or generic software against business needs and the objective to reduce costs.</p>
OPPORTUNITY	<p>Use of open source for software and applications would reduce</p>

licensing costs by the purchase/upgrade cost of the software and applications to be replaced.

BUSINESS OBJECTIVE & RATIONALE Reduce license fees paid to vendors.

Open source software is an alternative to purchasing licensing. Open source applications are available to replicate all desktop application software currently purchased from vendors. Administrative costs can increase when open source applications are implemented, so its best use would be when the entire County moves to open source for desktop applications or small work groups use it for specific applications not needing administrative support.

WORK FORCE AFFECT There would be an increase in training and support for technology and business personnel when moving from existing applications to open source applications.

3. Reduce Licensing Costs for Microsoft Software

ADVICE For agencies not already enrolled in the Microsoft Enterprise Agreement, purchase Microsoft software assurance for already owned Microsoft Office product licenses to reduce licensing costs in the future when joining the Enterprise Agreement.

Skip the upgrade to Microsoft's Vista operating system and instead prepare for upgrading to the Windows 7 operating system expected from Microsoft in 2011.

OPPORTUNITY Purchasing Microsoft software assurance for those Microsoft Office products licenses not already included in the Enterprise Agreement will reduce license fees when joining the Enterprise Agreement.

Focusing on preparing for Windows 7 will avoid upgrade investments in 2010 and allow each agency to develop a work plan for the upgrades as part of a coordinated deployment throughout the County.

BUSINESS OBJECTIVE & RATIONALE Standardize on a single version Microsoft Office and operating system and reduce future software licensing costs when joining the Microsoft Enterprise Agreement.

Microsoft offers two alternatives for licensing: individual licenses for each application purchased as single transactions, or subscription licenses for the broader desktop products purchased as part of an Enterprise Agreement. There are pros and cons for both relative to overall costs; however, the Enterprise Agreement allows agencies to deploy new software and application upgrades without new costs.

As the County pursues initiatives to improve standards and productivity through IT Reorganization, the County needs to be able to implement productivity products and ensure that employees are generally using

the same versions of software.

**WORK FORCE
AFFECT**

None.

C. Service and Support

4. Align Service Levels with Business Need

ADVICE

Evaluate support levels for coverage and response times and take action to align support levels with the business needs. Do this for support provided by internal IT staff, hardware vendors and applications vendors.

OPPORTUNITY

Internal IT Staff Support:

Potential savings associated with this advisory would be in the form of reduced after hours support, at approximately \$64.00 per hour.

Hardware and Application Vendor Support:

Expected savings range up to 15% or more for each business application, hardware and software maintenance contract.

**BUSINESS OBJECTIVE
& RATIONALE**

Aligning support levels for business applications and infrastructure to what is needed by the business will ensure that staffing levels are appropriate and the County is not paying for unnecessary vendor and service levels that are not needed or wanted.

Support for business applications and infrastructure can be established at various levels depending upon business needs for coverage (such as 24 hours or business hours) and response times (such as 30 minutes, 12 hours, or 3 days). This level is initially established at the time of implementation and should be regularly re-evaluated to determine if the support level continues to be appropriate.

**WORK FORCE
AFFECT**

Need for after-hours support by IT staff may decrease.

5. Consider Using Software-as-a-Service for New Applications

ADVICE

Consider the use of software-as-a-service (SaaS, typically pronounced 'sass') when new applications are acquired or old applications need to be replaced.

There are many different types of models for SaaS, including GoogleApps, Twitter, and Facebook. It may be easiest to think about SaaS as a model of software deployment where an application is licensed for use as a service provided to customers on-demand. On-

demand licensing and use alleviates the customer's burden of equipping a device with every application.

OPPORTUNITY

Using SaaS could conceivably reduce the up-front expense of software purchases through less costly, on-demand pricing from hosting service providers. This sharing of end user licenses and on-demand use may also reduce investment in server hardware or the shift of server use to SaaS suppliers of applications file services. When SaaS costs can be paid on a subscription basis, the cost can be spread across time, rather than as a large up-front expenditure.

**BUSINESS OBJECTIVE
& RATIONALE**

Reducing the cost of application acquisition and maintenance. Using SaaS could conceivably reduce the up-front expense of software purchases through less costly, on-demand pricing from hosting service providers.

The on-demand function may be handled internally to share licenses within the organization or by a third-party application service provider (ASP) sharing licenses between organizations. This sharing of end user licenses and on-demand use may also reduce investment in server hardware or the shift of server use to SaaS suppliers of applications file services.

**WORK FORCE
AFFECT**

Depends on service provided.

D. Risk Mitigation

6. Enforce Security and Acceptable Use Policies

ADVICE

Enforce all King County IT security and privacy policies, specifically acceptable use of IT assets, information privacy, vulnerability assessment and management and use of available security controls such as ePolicy Orchestrator, antivirus and host intrusion prevention.

OPPORTUNITY

Reducing the risk of business disruption and safeguarding the confidentiality, integrity and availability of public assets is one of the primary goals of IT security.

Acceptable use of IT assets clarifies expectation of County personnel with regard to their use of these assets.

Information privacy protects the confidentiality of personally identifiable information in the possession of King County and reduces potential impacts of breach notification and litigation due to improper disclosure of personally identifiable information. Studies on the Washington State Breach Law show that there is a cost to organizations of \$191 per personnel record compromised. If 10,000 personnel records of citizens

were compromised the costs would be \$1.9 million.

Proper vulnerability management reduces the possibility of business disruption and impairment of IT assets; one agency with staff of 600 unable to perform work for one day would have lost productivity costs over \$250,000.

BUSINESS OBJECTIVE & RATIONALE Minimize business disruption, safeguard public assets and reduces potential costs from unauthorized access.

Following established IT policies and promoting development and implementation of new policies reduces King County's risk to the confidentiality, availability and integrity of King County's information assets. Policies need to be followed unless an exception has been filed and approved by the CIO.

WORK FORCE AFFECT None.

E. Other

7. Consider Revenue Generation for Existing IT Services

ADVICE County IT organizations should work with the business leaders of their agencies to identify possible revenue opportunities. In the event some of these opportunities require development to support (e.g., incorporation of the e-payment engine to a web site), that work should be performed as soon as possible in 2009. Some specific opportunities may be:

- Home page advertising
- Agency page advertising/sponsorship (example: recreation company advertise on parks/recreation page; veterinarians advertise on animal services page or sponsor the pet-of-the-week)
- Page sponsorship, user search fees for JILS
- User searches/queries, page sponsorship for online GIS services
- Fees for new communications feeds for transportation services

OPPORTUNITY The monetary value of this opportunity varies based on the revenue opportunity and estimated value of the service. For estimation purposes, the following are some items for comparison:

For web site advertising and promotion – Commercial entities that advertise through the Google Affiliate Program pay between 7 and 15 percent for every sale that results through online ads.

For promoted web links – Commercial entities may pay between \$.01

and \$.05 per “page view” on a promoted link.

For fee-based transactions – Users are generally charged between \$5 and \$10 for online fees for value-added services, and may be charged as much as \$20 for unique services. This is consistent with existing County online fees (e.g., tax payment, court electronic document access) and state fees (e.g., State Patrol criminal history search).

**BUSINESS OBJECTIVE
& RATIONALE**

Offset direct costs of operating specific technology services, thus freeing up funds for other IT operations.

Within the category of revenue generation, there are five specific opportunities to explore:

- Web site promotion: It is to be determined if a public entity can accept web advertising. The County does accept advertising through other public facing mediums, most notably busses.
- Web page/service sponsorship: If true “advertising” is not permitted, another consideration is page or service sponsorship. The County has already done something similar, with “partners” sponsoring the King County Fair (and receiving promotion online).
- Fee based online transactions: Again, the County already collects a processing fee for online property tax payments. The County provides many other online services that represent value-added services to constituents, for which they may be willing to pay for the convenience.
- Recouping costs for regional partners: In some cases, the County provides a regional IT service without charge to the public or private partners. It may be time to examine the benefits of such services, and where regional partners are realizing monetary benefit, share the costs of the service.
- Data center space: If, as a result of the County’s 2009 efforts, there is excess space in the new County data center, it may be possible to lease the excess space to some other entity (such as a backup facility for a municipal agency).

**WORK FORCE
AFFECT**

None.

Section 3: Efficiency Opportunities Through IT Maturity

In 2008, the Strategic Advisory Committee discussed IT efficiency opportunities through increased maturity of the IT practices and directed the County to pursue these opportunities for additional labor efficiencies and improved customer service through changes in the IT services support model being driven by the IT Reorganization program for the Executive branch. These improvements will result in additional labor efficiencies between 35,000 to 44,000 hours annually based on benchmark comparisons with peer organizations. These efficiencies translate into changes in costs as shown below for three focus areas: server operations, workstation operations and service center.

Efficiency Opportunities from Improving IT Maturity through IT Reorganization

Operational Area		Range Of Labor Hours Savings	Range Of Dollar Savings
Server Operations	Labor	14,000 – 17,000	\$605,000 - \$735,250
	Equipment		\$115,844
Desktop Operations	Labor	8,000 – 11,000	\$346,000 - \$475,750
	Equipment – Alternate Workstations		\$507,560
Service Center	Labor	13,000 – 16,000	\$562,250 - \$692,000
Total IT Efficiencies	Annual	35,000 – 44,000	\$1,513,750 - \$2,526,404
	One-Time		\$623,404

Through the IT Reorganization program changes in the IT services support model, the County's operational maturity will improve to be on-par with regional/state/local government industry leaders that are at the "standardized" level (level 2) of capability and maturity, on a scale of 1 to 4. The standardized level of maturity is described by Microsoft and Alinean as "IT organizations have somewhat better IT costs with similar service levels and agility when compared with Basic organizations. These firms leverage some of the easier-to-implement best practices. These companies have average levels of innovation and investment." For more information about IT operational maturity, see the Updated Benefits Realization Plan, August 2008 for the IT Reorganization Program for Executive Branch IT.

Section 4: Budget Advisory Estimated Savings

The table below provides a summary estimate of budget savings. The table is split into three areas. The first area titled "Known Saving Amounts" contains amounts that are known or have already occurred and should be included in the 2010 budget request. The second area is titled "Savings Amounts Requiring 2009 Follow-up" and contains potential savings that have been identified, but need additional work done in 2009 to confirm amounts. These should be considered for inclusion in the 2010 budget request. The final area is titled "Efficiency & Risk Mitigation" and contains items that may lead to direct or indirect savings, and may mitigate risk. No amounts are provided, but these items should be considered to mitigate risk or to produce efficiencies.

IT Budget Advisory Areas Of Opportunity	Savings Nature	Estimated Savings (Executive Branch)	Savings Identified by Depts.	Notes
Known Saving Amounts				
Avoid Purchasing New PCs:				
No New PCs Purchased	Amounts are based on known replacement plans.	\$ 1,100,000		Deferring replacement reduce cycle costs. Assumes 50% of computers are not replaced 2010.
Alternate Workstation	Amounts are based on review preformed in 2008.	\$ 240,000		Provides lower cost alternatives to PCs. Assumes 30% of PCs are replaced with alternate workstations.
Use Power Management on Desktops Computers	Amounts are based on 2008 & 2009 actual results.	\$ 168,000		Energy savings based on achieving established policy of 39.6%.
Reduce the Overall Technology Costs				
No New Servers Purchased	Amounts are based on known replacement plans.	\$ 180,000		Deferring replacement reduce cycle costs. Assumes 15% of servers (19) are not replaced 2010.
Virtualize Servers	Amounts are based on consultant study completed in late 2008.	\$ 111,137		Assumes in 2010 83 servers will be virtualized
Reduce Cell Phone and Wireless Device Costs	Amounts are based on 2009 actual results.	\$ 344,996		Lower cell phone plan costs. See Appendix A for individual agency portion.
Savings Amounts Requiring 2009 Follow-up				
Use Only Printers That Can Be Shared	Amounts will be determined based on work that will be completed in 2009.	\$ 50,000		Reduces existing supplies, maintenance, and support costs for printers, copiers, and faxes.
Reduce Cost of IT Purchases	Amounts are based on industry standards and	\$ 500,000		Use master contracts and extend contracts to 5

KING COUNTY IT BUDGET ADVISORY

IT Budget Advisory Areas Of Opportunity	Savings Nature	Estimated Savings (Executive Branch)	Savings Identified by Depts.	Notes
	estimates of work that will be completed in 2009.			years.
Efficiency & Risk Mitigation				
Move IT Equipment to New County Data Center	Reduces the potential risk to IT assets.	\$ -		Potential costs of asset loss or business disruption are mitigated.
Focus on Mandatory and Essential IT Projects	Amounts will be based on work that will be completed in 2009.	\$ -		Funds shifted to high priority projects or not spent.
Update Critical Applications for Disaster and Emergency	Reduces the potential risk to IT applications.	\$ -		Potential costs of business disruption are mitigated.
Standardize on Tools for Network Efficiency	Efficiency gains that will allow the County to direct efforts in other IT areas.	\$ -		Software, hardware, and labor savings.
Standardize on One Countywide Help Desk	Efficiency gains that will allow the County to direct efforts in other IT areas.	\$ -		Software, hardware, and labor savings.
Use Remote Management Software to Increase Efficiency of Desktop Support	Efficiency gains that will allow the County to direct efforts in other IT areas.	\$ -		Quick-ship disaster service – reduction in servers.
Use Technology as Alternative to Travel	Efficiency gains that will allow the County to direct efforts in other areas.	\$ -		Travel cost reductions and productivity gains.
Total 2010 Savings		\$ 2,694,133		

Appendix A - Cell Phone Savings by Agency

DAJD	\$17,854.56
DCHS	\$11,588.76
DDES	\$ 3,445.92
DES	\$31,147.44
HRD	\$ 776.28
DNRP	\$96,145.68
DOT	\$88,526.64
Airport	\$ 4,313.28
DPH	\$49,194.48
KCEO	\$ 2,599.92
OMB	\$ 437.40
OIRM	\$10,123.20
KCC	\$ 7,223.40
KC Elections	\$ 578.52
KCDC	\$ 9,692.04
KCSC	\$ 5,554.20
KCSO	\$ 115.44
PAO	\$ 5,678.76
Total	\$344,995.92